

**REMARKS**

Claims 3-24, 26-29 and new claim 30 are pending. The support in the original specification for the amendments to the claims and new claim is as follows: Claims 3, 9, 11: canceled claims 1 and 2; Claim 19: canceled claim 1; Claims 10, 16-18, 20 and 22-24: dependency; and new Claim 30: p. 12, lines 17-21, p.17, lines 18-21. No new matter is added.

The Applicant appreciates that Claims 3-9 and 19 are indicated as being allowable if written in independent form, which they have been by incorporating either claims 1 and 2 or just claim 1, making the claims allowable.

Previously withdrawn claims 20-24 are now amended to depend from allowable claim 3.

**The Applicant has not filed a certified copy of JP2004-087666.** (Office Action p.2)

The June 11, 2008 Notice of Missing Requirements indicates that the Priority Document as been received, thereby satisfying this requirement. Should the document still be missing and since this application was filed after July 28, 2007, it is respectfully requested that the Priority Document be obtained electronically from the Japan Patent Office via the US PTO Priority Document Exchange program to satisfy the requirement.

**The Abstract should be limited to a single paragraph on a separate sheet within the range of 50 to 150 words.** (Office Action p.2)

The Abstract is amended to conform to PTO practice, making this objection now moot.

**Claim 18 is objected to for informalities.** (Office Action p.3)

Claim 18 is amended as suggested by the Examiner, making the objection moot.

**Claims 1-2, 10-18 and 25-29 are rejected under 35 U.S.C. § 103(a) as unpatentable on US Patent Publication 2002/0191884 to Letant, et al.** (Office Action p.3)

Claims 1 and 2 are canceled and Claims 10, 12-18 are ultimately dependent from allowable Claim 3.

Claim 11 is amended with canceled claims 1 and 2, which is believed to be allowable for at least the following reasons:

The object of claim 11, and claims dependent thereon, is to exactly measure the density of the target substance on the basis of the resonance of the electromagnetic wave at the specific wavelength by introducing the electromagnetic wave into the photonic sensor under the condition where the photonic sensor is exposed to an atmosphere including the target substance. In order to achieve the above object, it is necessary to exactly measure a peak value of a specific frequency of resonance.

However, when the electromagnetic wave having a predetermined range of the frequency is introduced into the photonic sensor, there is a possibility of that the specified frequency which is resonated disappears into the frequency around the specified frequency. Therefore, it is difficult to measure the peak value in the specific frequency of resonance.

The claim 11 solves this problem. The configuration of sweeping the wavelength of the electromagnetic wave which is generated from the electromagnetic wave source makes it possible to measure the peak value in each the frequency of resonance. Consequently, the peak value in the specific wavelength is free from the peak value in the wavelength around the specific wavelength.

In addition, the invention in claim 30 recites a sweep controller which is configured to sweep the wavelength. This configuration also makes it possible to solve the above problem.

Letant does not teach and suggest the above problem in part because Letant discloses a different detection system in [0049] and FIG. 6, where light is transmitted through a photonic waveguiding silicon filter and focused on a detector. In addition, Letant does not teach and suggest the necessity to solve the above problem. Therefore, the means for solving the above problem is not obvious from Letant. Without more, the cited art cannot make a *prima facie* rejection of obviousness.

It is respectfully requested that the rejection be reconsidered and withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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